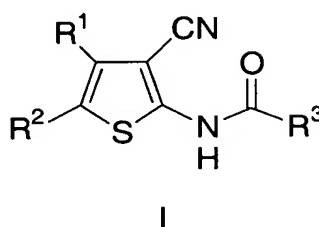


WHAT IS CLAIMED IS:

1. A compound represented by formula I:



or a pharmaceutically acceptable salt or solvate thereof wherein:

- 5 R^1 is selected from the group consisting of: H, C_{1-10} alkyl, Aryl, Heteroaryl and Heterocyclyl,
 said alkyl, Aryl, Heteroaryl and Heterocyclyl being optionally substituted with one to four substituents independently selected from R^6 ;
 R^2 is selected from the group consisting of: Aryl, Heteroaryl, Heterocyclyl,
 10 $SO_2NR^4R^5$, NR^4R^5 , $NR^4C(O)R^5$, $NR^4CO_2R^5$, $NR^4SO_2R^5$, OR^4 and C_{1-10} alkyl substituted with one to four substituents selected from R^6 ,
 said Aryl, Heteroaryl and Heterocyclyl being optionally substituted with one to four substituents independently selected from R^6 , and
 R^3 is selected from the group consisting of: C_{1-10} alkyl and Aryl, said alkyl and
 15 Aryl being optionally substituted with one to four substituents independently selected from R^6 ;
 R^4 is selected from the group consisting of: H, C_{1-10} alkyl, Aryl, Heteroaryl, Heterocyclyl, said alkyl, Aryl, Heteroaryl, and Heterocyclyl being optionally substituted with one to four substituents independently selected from R^6 ;
 R^5 is selected from the group consisting of: C_{1-10} alkyl, Aryl, Heteroaryl and
 20 Heterocyclyl, said alkyl, cycloalkyl, Aryl Heteroaryl, and Heterocyclyl being optionally substituted with one to four substituents independently selected from R^6 ;
 or alternatively, R^4 and R^5 are taken together with the atoms to which they are attached and represent a ring of 5 to 8 members containing 0-2 heteroatoms independently selected from oxygen, sulfur and nitrogen, and optionally substituted with one to four
 25 substituents independently selected from R^6 ;
 when R^2 represents C_{1-10} alkyl, each R^6 is independently selected from the group consisting of: halo, Aryl, Heteroaryl, Heterocyclyl, OR^7 , SR^7 , $S(O)_mR^8$, $S(O)_2OR^8$, $S(O)_mNR^7R^8$, NO_2 , NR^7R^8 , $O(CR^9R^{10})_nNR^7R^8$, $C(O)R^8$, CO_2R^7 , $CO_2(CR^9R^{10})_nCONR^7R^8$, $OC(O)R^8$, CN , $C(O)NR^7R^8$, $NR^7C(O)R^8$, $OC(O)NR^7R^8$, $NR^7C(O)OR^8$, $NR^7C(O)NR^8R^9$, $CR^7(NOR^8)$, $(CR^9R^{10})_n$ -Aryl, $(CR^9R^{10})_n$ -Heteroaryl, $(CR^9R^{10})_n$ -Heterocyclyl, CF_3 and OCF_3 ,
 30

and when R^2 is other than C_{1-10} alkyl, R^6 is independently selected from the group consisting of halo, C_{1-7} alkyl, Aryl, Heteroaryl, Heterocyclyl, OR^7 , SR^7 , $S(O)_mR^8$, $S(O)_2OR^8$, $S(O)_mNR^7R^8$, NO_2 , NR^7R^8 , $O(CR^9R^{10})_nNR^7R^8$, $C(O)R^8$, CO_2R^7 , $CO_2(CR^9R^{10})_nCONR^7R^8$, $OC(O)R^8$, CN , $C(O)NR^7R^8$, $NR^7C(O)R^8$, $OC(O)NR^7R^8$, $NR^7C(O)OR^8$, $NR^7C(O)NR^8R^9$,
 5 $CR^7(NOR^8)$, $(CR^9R^{10})_n$ -Aryl, $(CR^9R^{10})_n$ -Heteroaryl, $(CR^9R^{10})_n$ -Heterocyclyl, CF_3 and OCF_3 ;

wherein m is 0, 1 or 2 and n is an integer from 1 to 7, and the alkyl, Heterocyclyl, Aryl and Heteroaryl groups and portions are optionally substituted with 1-4 substituents selected from a group independently selected from R^{11} ;

10 R^7 , R^9 and R^{10} are independently selected from the group consisting of: H, C_{1-7} alkyl, Aryl, Ar- C_{1-10} alkyl and mono-, di- and tri- halo substituted Ar- C_{1-10} alkyl,

or one R^9 and one R^{10} are taken together with the atoms to which they are attached and any intervening atoms and represent a ring of 3 to 8 members containing 0-2 heteroatoms independently selected from O, S and N;

15 R^8 is selected from the group consisting of: C_{1-10} alkyl, Aryl and C_{1-10} alkyl-Aryl; and

R^{11} is selected from the group consisting of: halo, CN, C_{1-4} alkyl, Aryl, CF_3 and OH.

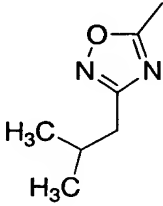
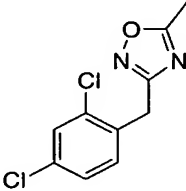
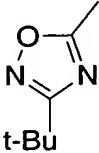
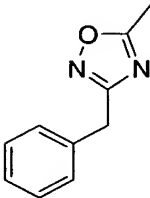
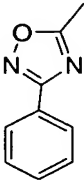
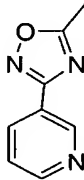
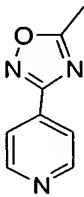
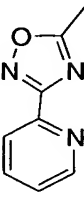
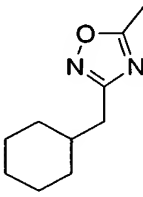
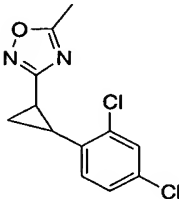
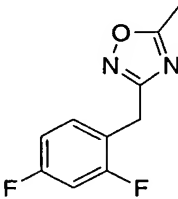
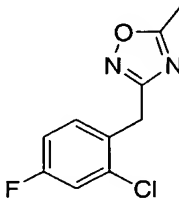
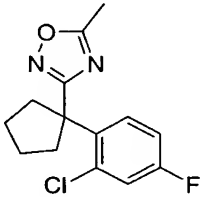
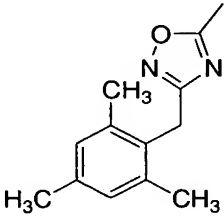
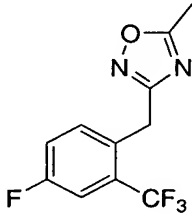
20 2. A compound in accordance with claim 1 wherein R^1 represents C_{1-10} alkyl.

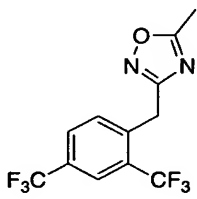
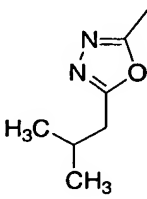
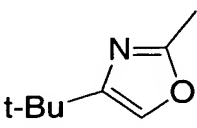
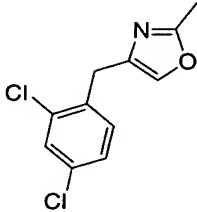
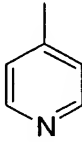
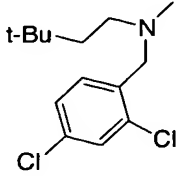
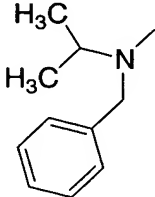
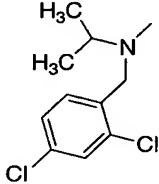
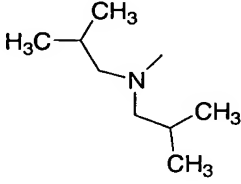
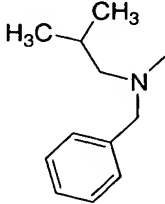
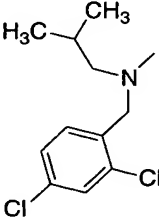
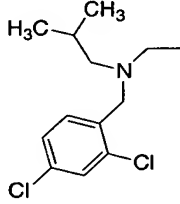
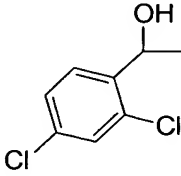
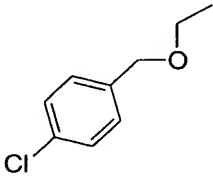
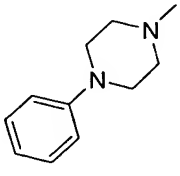
3. A compound in accordance with claim 2 wherein R^1 represents C_{1-4} alkyl.

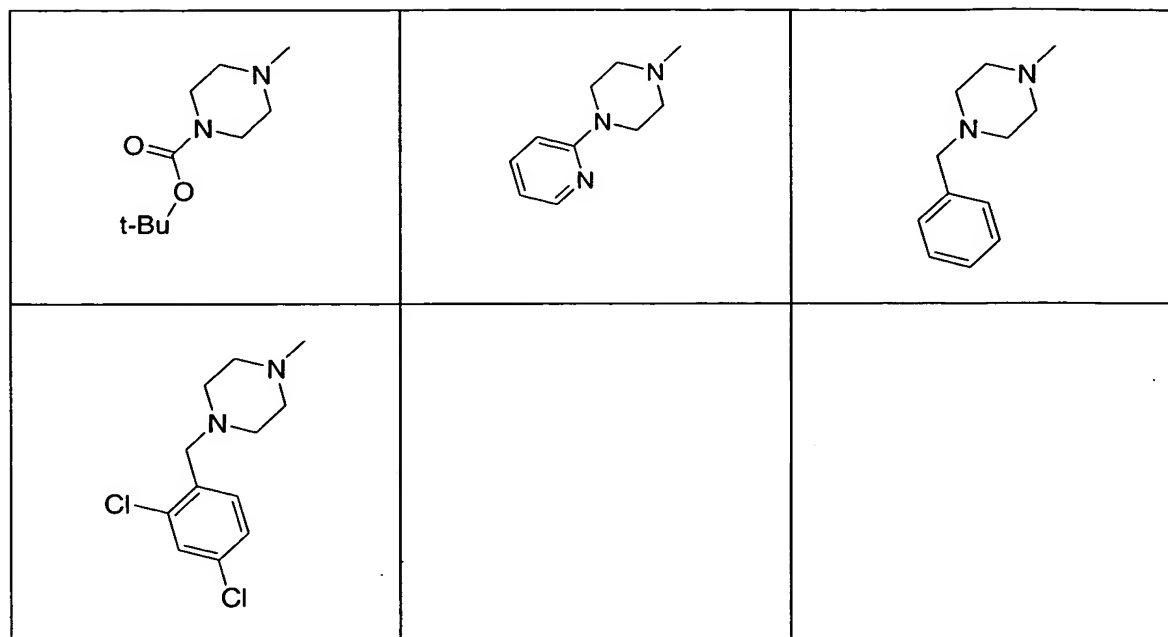
4. A compound in accordance with claim 3 wherein R^1 represents methyl.

25 5. A compound in accordance with claim 1 wherein R^2 is selected from the group consisting of: Heteroaryl or Heterocyclyl, each optionally substituted with 1 R^6 group, NR^4R^5 , or C_{1-10} alkyl substituted with 1-2 R^6 groups.

30 6. A compound in accordance with claim 5 wherein R^2 is selected from the table below:

R^2		
		
		
		
		
		



7. A compound in accordance with claim 1 wherein R^3 is C_{1-10} alkyl with 0-1 R^6 groups attached.

5 8. A compound in accordance with claim 1 wherein R^4 is H or C_{1-10} alkyl.

9. A compound in accordance with claim 1 wherein R^5 is C_{1-10} alkyl having 1-2 R^6 groups attached.

10 10. A compound in accordance with claim 1 wherein R^2 represents Heteroaryl or Heterocyclyl, each with 1 R^6 group attached selected from the group consisting of: C_{1-4} alkyl, C_{3-7} cycloalkyl, Aryl, Heteroaryl, Heterocyclyl, OR^7 , $(CR^9R^{10})_n$ -Aryl, $(CR^9R^{10})_n$ -Heteroaryl and $(CR^9R^{10})_n$ -Heterocyclyl.

15 11. A compound in accordance with claim 5 wherein R^2 represents NR^4R^5 wherein R^4 is H or C_{1-10} alkyl, and R^5 is C_{1-10} alkyl having 1-2 R^6 groups attached.

12. A compound in accordance with claim 5 wherein R^2 represents C_{1-10} alkyl with 1-2 R^6 groups attached selected from OR^7 , Aryl, mono-halophenyl and di-halophenyl.

20

13. A compound in accordance with claim 1 wherein:

R^1 represents C_{1-10} alkyl;

R^2 represents Heteroaryl or Heterocyclyl with 0-1 R^6 groups attached, NR4R5, or C_{1-10} alkyl with 1-2 R^6 groups attached;

R^3 represents C_{1-10} alkyl with 0-1 R^6 groups attached;

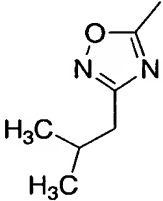
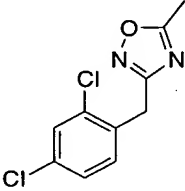
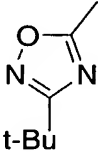
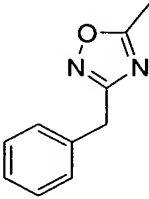
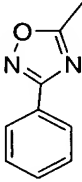
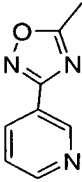
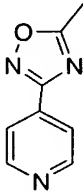
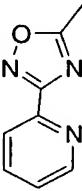
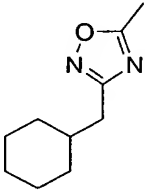
5 R^4 is H or C_{1-10} alkyl;

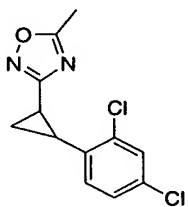
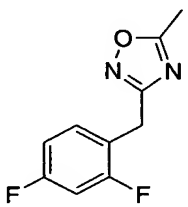
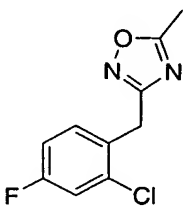
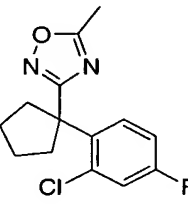
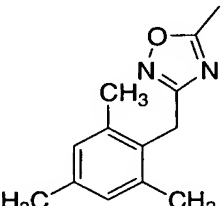
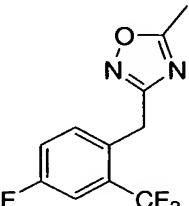
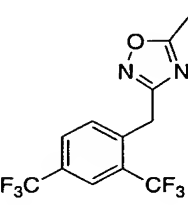
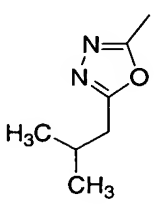
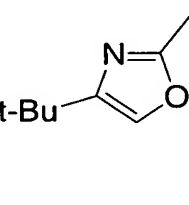
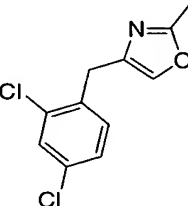
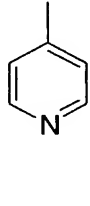
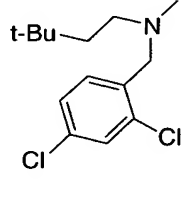
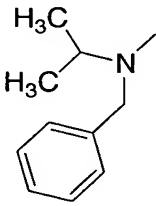
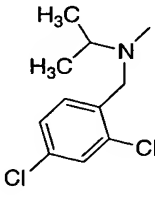
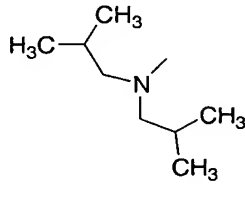
R^5 is C_{1-10} alkyl with 1-2 R^6 groups attached, and R^6 through R^{11} are as originally defined.

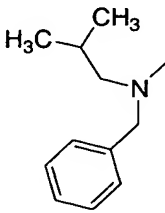
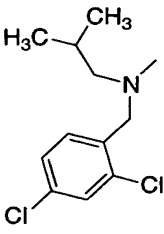
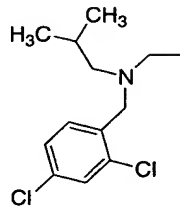
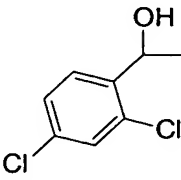
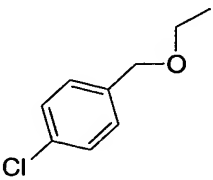
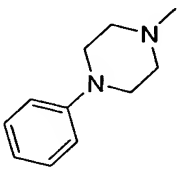
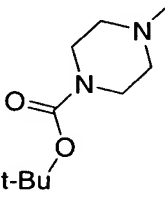
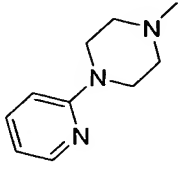
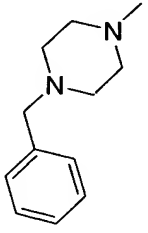
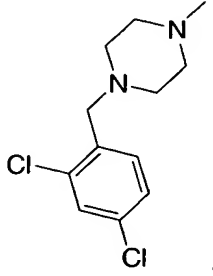
14. A compound in accordance with claim 5 wherein:

10 R^1 represents methyl;

R^3 represents 3-pentyl, and R^2 is selected from the table below:

R^2		
		
		
		

15. A compound in accordance with claim 1 selected from the group consisting of:

- N-[3-cyano-5-(3-isobutyl-1,2,4-oxadiazol-5-yl)-4-methylthien-2-yl]-2-ethylbutanamide;
 5 N-{3-cyano-5-[3-(2,4-dichlorobenzyl)-1,2,4-oxadiazol-5-yl]-4-methylthien-2-yl}-2-ethylbutanamide;
 N-[5-(3-tert-butyl-1,2,4-oxadiazol-5-yl)-3-cyano-4-methylthien-2-yl]-2-ethylbutanamide;
 N-[5-(3-benzyl-1,2,4-oxadiazol-5-yl)-3-cyano-4-methylthien-2-yl]-2-ethylbutanamide;
 N-[3-cyano-4-methyl-5-(3-phenyl-1,2,4-oxadiazol-5-yl)thien-2-yl]-2-ethylbutanamide;

- N-[3-cyano-4-methyl-5-(3-pyridin-2-yl-1,2,4-oxadiazol-5-yl)thien-2-yl]-2-ethylbutanamide;
 N-[3-cyano-4-methyl-5-(3-pyridin-3-yl-1,2,4-oxadiazol-5-yl)thien-2-yl]-2-ethylbutanamide;
 N-[3-cyano-4-methyl-5-(3-pyridin-4-yl-1,2,4-oxadiazol-5-yl)thien-2-yl]-2-ethylbutanamide;
 N-{3-cyano-5-[3-(cyclohexylmethyl)-1,2,4-oxadiazol-5-yl]-4-methylthien-2-yl}-2-ethylbutanamide;
 5 N-(3-cyano-5-{3-[1-(2,4-dichlorophenyl)cyclopropyl]-1,2,4-oxadiazol-5-yl}-4-methylthien-2-yl)-2-ethylbutanamide;
 N-{3-cyano-5-[3-(2,4-difluorobenzyl)-1,2,4-oxadiazol-5-yl]-4-methylthien-2-yl}-2-ethylbutanamide;
 10 N-{5-[3-(2-chloro-4-fluorobenzyl)-1,2,4-oxadiazol-5-yl]-3-cyano-4-methylthien-2-yl}-2-ethylbutanamide;
 N-(5-{3-[1-(2-chloro-4-fluorophenyl)cyclopentyl]-1,2,4-oxadiazol-5-yl}-3-cyano-4-methylthien-2-yl)-2-ethylbutanamide;
 N-{3-cyano-5-[3-(mesitylmethyl)-1,2,4-oxadiazol-5-yl]-4-methylthien-2-yl}-2-ethylbutanamide;
 15 N-(3-cyano-5-{3-[4-fluoro-2-(trifluoromethyl)benzyl]-1,2,4-oxadiazol-5-yl}-4-methylthien-2-yl)-2-ethylbutanamide;
 N-(5-{3-[2,4-bis(trifluoromethyl)benzyl]-1,2,4-oxadiazol-5-yl}-3-cyano-4-methylthien-2-yl)-2-ethylbutanamide;
 N-[3-cyano-5-(5-isobutyl-1,3,4-oxadiazol-2-yl)-4-methylthien-2-yl]-2-ethylbutanamide;
 20 N-[5-(4-tert-butyl-1,3-oxazol-2-yl)-3-cyano-4-methylthien-2-yl]-2-ethylbutanamide;
 N-{3-cyano-5-[4-(2,4-dichlorobenzyl)-1,3-oxazol-2-yl]-4-methylthien-2-yl}-2-ethylbutanamide;
 N-(3-cyano-4-methyl-5-pyridin-4-ylthien-2-yl)-2-ethylbutanamide;
 N-{3-cyano-5-[(2,4-dichlorobenzyl)(3,3-dimethylbutyl)amino]-4-methylthien-2-yl}-2-ethylbutanamide;
 25 N-{5-[benzyl(isopropyl)amino]-3-cyano-4-methylthien-2-yl}-2-ethylbutanamide;
 N-{3-cyano-5-[(2,4-dichlorobenzyl)(isopropyl)amino]-4-methylthien-2-yl}-2-ethylbutanamide;
 N-[3-cyano-5-(diisobutylamino)-4-methylthien-2-yl]-2-ethylbutanamide;
 N-{5-[benzyl(isobutyl)amino]-3-cyano-4-methylthien-2-yl}-2-ethylbutanamide;
 N-{3-cyano-5-[(2,4-dichlorobenzyl)(isobutyl)amino]-4-methylthien-2-yl}-2-ethylbutanamide;
 30 N-{3-cyano-5-[(2,4-dichlorophenyl)(hydroxymethyl)-4-methylthien-2-yl]-2-ethylbutanamide;
 N-(3-cyano-5-{[(2,4-dichlorobenzyl)(isobutyl)amino]methyl}-4-methylthien-2-yl)-2-ethylbutanamide;
 N-[3-cyano-4-methyl-5-(4-phenylpiperazin-1-yl)thien-2-yl]-2-ethylbutanamide;
 tert-butyl 4-{4-cyano-5-[(2-ethylbutanoyl)amino]-3-methylthien-2-yl}piperazine-1-carboxylate;
 35 N-[3-cyano-4-methyl-5-(4-pyridin-2-ylpiperazin-1-yl)thien-2-yl]-2-ethylbutanamide;

N-[5-(4-benzylpiperazin-1-yl)-3-cyano-4-methylthien-2-yl]-2-ethylbutanamide;

N-{3-cyano-5-[4-(2,4-dichlorobenzyl)piperazin-1-yl]-4-methylthien-2-yl}-2-ethylbutanamide;
and

5 N-(5-{[(4-chlorobenzyl)oxy]methyl}-3-cyano-4-methylthien-2-yl)-2-ethylbutanamide, as well as
the pharmaceutically acceptable salts and solvates thereof.

16. A pharmaceutical composition which is comprised of a compound in
accordance with claim 1 in combination with a pharmaceutically acceptable carrier.

10 17. A method of treating type 2 diabetes mellitus in a mammalian patient in
need of such treatment, comprising administering to said patient a compound in accordance with
claim 1 in an amount that is effective to treat type 2 diabetes mellitus.

15 18. A method of preventing or delaying the onset of type 2 diabetes mellitus in
a mammalian patient in need thereof, comprising administering to said patient a compound in
accordance with claim 1 in an amount that is effective to prevent or delay the onset of type 2
diabetes mellitus.